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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: SUNDARAM, Mani et al.

Group Art Unit: 2878

Serial No. 10/829,574

Examiner:

Filed: 04/22/2004

Atty. Dkt. No: 20030126-CIP

For: QWIP WITH TUNABLES SPECTRAL RESPONSE

To: Mail Stop Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

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Date: 7/16/04

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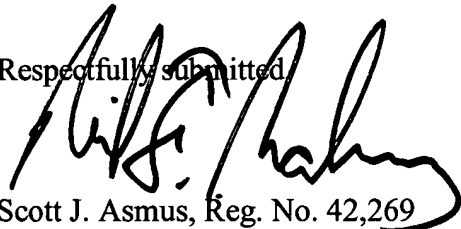
TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT

Transmitted herewith is the Applicant's Information Disclosure Statement, 4 sheets form PTO/SB/08A and/or PTO/SB/08B, and 2 references and other information. Pursuant to 37 CFR 1.98 (a)(2)(i) applicant has not transmitted herewith copies of cited U.S. Patents and U.S. patent application publications as the above application was filed after June 30, 2003. In accordance with 37 CFR 1.98(d) copies of the references denoted by ** are not provided as they were previously submitted to, or cited by, the Office in prior Application No. 09/746,956 filed 12/22/2000, which is being relied on for an earlier effective filing date under U.S.C. § 120. Should Office require copies of these references, the applicant will be happy to provide them upon request. Please enter in the above application and communicate in all related matters with the undersigned.

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Respectfully submitted,



Scott J. Asmus, Reg. No. 42,269
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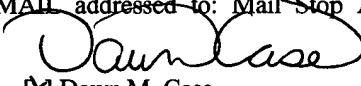
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INFORMATION DISCLOSURE STATEMENT

Applicants submit this statement and the attached 4 sheet(s) of form PTO/SB/08A and/or PTO/SB/08B and 2 references and other information in accordance to the duty of disclosure under 37 C.F.R. §§1.56, 1.97, and 1.98, and requests consideration hereof. Pursuant to 37 CFR 1.98 (a)(2)(i) applicant has not transmitted herewith copies of cited U.S. Patents and U.S. patent application publications as the above application was filed after June 30, 2003. In accordance with 37 CFR 1.98(d) copies of the references denoted by ** are not provided as they were previously submitted to, or cited by, the Office in prior Application No. 09/746,956 filed 12/22/2000, which is being relied on for an earlier effective filing date under U.S.C. § 120. Should Office require copies of these references, the applicant will be happy to provide them upon request.

Compliance with 37 C.F.R. §1.97: This Information Disclosure Statement is filed within three (3) months of the filing date of a National Application or before the mailing date of a first office action on the merits. No fee or certification is required.

Information Cited: The Applicants hereby make of record in the above-identified application, the information listed on the attached form PTO/SB/08A and/or PTO/SB/08B. The order of presentation of the references should not be construed as an indication of the importance of the reference. As all the references listed on attached Form PTO/SB/08A and/or PTO/SB/08B are in English, no commentary is required.

Remarks: A copy of each reference, together with a listing on Form PTO/SB/08A and/or PTO/SB/08B, is submitted herewith. Applicants respectfully request that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;

2. The enclosed form PTO/SB/08A and/or PTO/SB/08B be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application; and

3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicants make no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

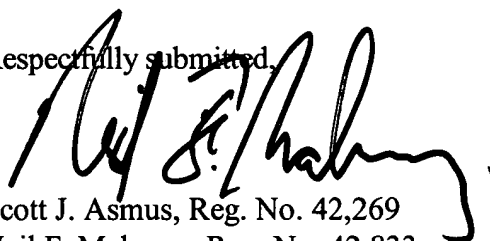
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Notwithstanding any statement by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted,



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Neil F. Maloney, Reg. No. 42,833
Andrew P. Cernota, Reg. No. 52,711
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 1 of 4

Complete if Known

Application Number	10/829,574
Filing Date	04/22/2004
First Named Inventor	Sundaram, Mani et al.
Art Unit	2878
Examiner Name	
Attorney Docket Number	20030126-CIP

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 5,229,614	07-20-1993	Andersson et al.	
		US- 5,355,000	10-11-1994	Delacourt et al.	
		US- 5,384,469	01-24-1995	Choi	
		US- 5,539,206	07-23-1996	Schimert	
		US- 5,552,603	09-03-1996	Stokes	
		US- 5,546,209	08-13-1996	Willner et al.	
		US- 5,568,574	10-22-1996	Tanguay, Jr. et al.	
		US- 5,751,830	05-12-1998	Hutchinson	
		US- 5,818,051	10-06-1998	Dreiske et al.	
		US- 5,909,303	06-01-1999	Trezza et al.	
		US- 5,959,339	09-28-1999	Chapman et al.	
		US- 6,091,126	07-18-2000	Costard et al.	
		US- 6,104,046	08-15-2000	Borenstain	
		US- 6,184,538 B1	02-06-2001	Bandara et al.	
		US- 6,469,358 B1	10-22-2002	Martin	
		US- 6,495,830 B1	12-17-2002	Martin	
		US- 6,498,346 B1	12-24-2002	Martin	
		US- 6,531,700 B1	03-11-2003	Brown et al.	
		US- 6,561,693 B1	05-13-2003	Martin	

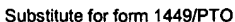
FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
		**WO 98/09141	03-05-1998	Gunapala et al.		

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Complete if Known

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10/829.574

Filing Date

04/22/2004

First Named Inventor

Sundaram, Mani et al.

Art Unit

2878

Examiner Name _____

Attorney Docket Number

20030126-CIP

U. S. PATENT DOCUMENTS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known	
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Sheet 3 of 4	Attorney Docket Number		20030126-CIP

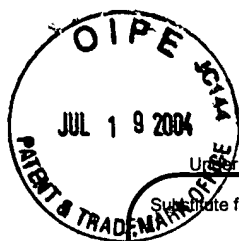
NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		ALMOGY, GILAD, et al., "Monolithic integration of quantum well infrared photodetector and modulator", Appl. Phys. Lett., April 8, 1996, pp. 2088-2090, vol. 68 no. 15, American Institute of Physics.	
		VAYA, P.R. et al. "STUDY OF VOLTAGE TUNABLE ASYMMETRIC QUANTUM WELL STRUCTURE FOR INFRARED DETECTION", 2004, pp. 1-5, Nano Science and Technology Institute.	
		**MARSAN, AJOME M. et al, "Modelling Slotted Multi-Channel Ring All-Optical Networks", IEEE, 1997, pp. 146-153.	
		**MARSAN, AJOME M. et al, "Access Protocols for Photonic WDM Multi-Rings with Tunable Transmitters and Fixed Receivers", SPIE, vol. 26921, pp. 59-72.	
		**BECKMANN, CARL, "Applications: Asynchronous Transfer Mode and Synchronous Optical Network", Handbook of Fiber Optic Data Communication, 1998, pp. 385 -414, Academic Press.	
		**ROSS, FLOYD E., "An Overview of FDDI: The Fiber Distributed Data Interface", IEEE Journal on Selected Areas in Communications, Sept. 1989, pp. 1043-1051, vol. 7 no. 7.	
		**GUNAPALA et al., "15-um 128 x 128 GaAs / AlxGal-xAs Quantum Well Infrared Photodetector Focal Plane Array Camera", IEEE Transactions on Electron Devices, Jan. 1997, pp. 45-50, vol. 44 no. 1.	
		**TIDROW et al., "Granting coupled multicolor quantum well infrared photodetectors", Appl. Phys. Lett., Sept. 25, 1995, pp. 1800-1802, vol. 67 no. 13.	
		**ANDERSSON et al., "Grating-coupled quantum-well infrared detectors: Theory and performance", J. Appl. Phys., April 1, 1992, pp. 360--3610, vol. 71 no. 7.	
		**PCT International Search Report dated March 8, 2001 of International Appl. No. PCT/US00/35762 filed Dec. 12, 2000.	

Examiner Signature	Date Considered
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Attorney Docket Number	20030126-CIP

Sheet	4	of	4
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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		**SUNDARAM, Mani and REISINGER, Axel, Avalanche QWIP, 7 pgs.	
		**SUNDARAM, Mani and REISINGER, Axel, Tunable QWIP with Asymmetric Quantum Wells, 7 pgs.	
		**SUNDARAM, Mani and REISINGER, Axel, Bimodal QWIP with Coupled Quantum Wells, 8 pgs.	
		**SUNDARAM, Mani and REISINGER, Axel, Blocked Superlattice Miniband QWIP with/without Graded Barriers, 8 pgs.	
		**SUNDARAM, Mani and REISINGER, Axel, Tunable Multi-Color QWIP, 7 pgs.	
		**SUNDARAM, Mani and REISINGER, Axel, Rotated Waffle-Grating Optical Coupler for QWIPs, 14 pgs.	
		**SUNDARAM, Mani and REISINGER, Axel, Hybrid Metal Optical Coupler for QWIPs, 7 pgs.	
		**SUNDARAM, Mani and REISINGER, Axel, Photon-in-Box QWIP, 9 pgs.	

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